

SHINFIELD WEST AND LANGLEY MEAD: FIVE YEARS ON

RESULTS OF ECOLOGICAL MONITORING SURVEYS





AN OPPORTUNITY TO TURN BACK TIME

- The landscape around Shinfield in the early 2000s was largely agricultural and low in biodiversity...
- ... but old maps show that it was once a mosaic of traditional meadows, wiggly hedgerows and copses which would have been full of wildlife
- The development of Shinfield West required the creation of new public open space
- Could we turn back the clock and create something that would benefit both people and wildlife?

The Inspiration: The Earl of Fingall's Estate Map of Shinfield, 1756

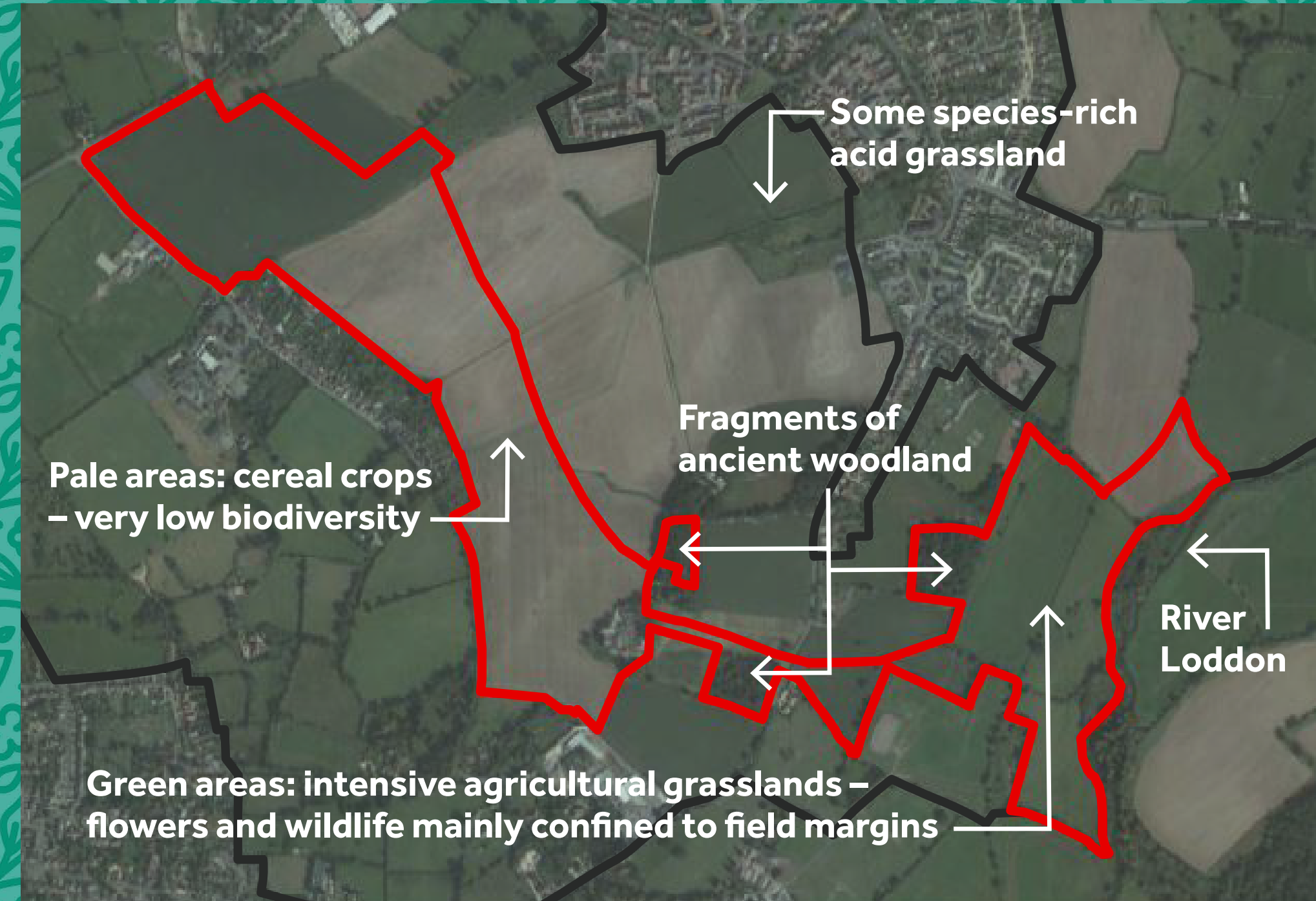
2012: AN (ALMOST) BLANK CANVAS



Langley Mead – taken in November 2009



The Ridge – taken in October 2009



OUR VISION

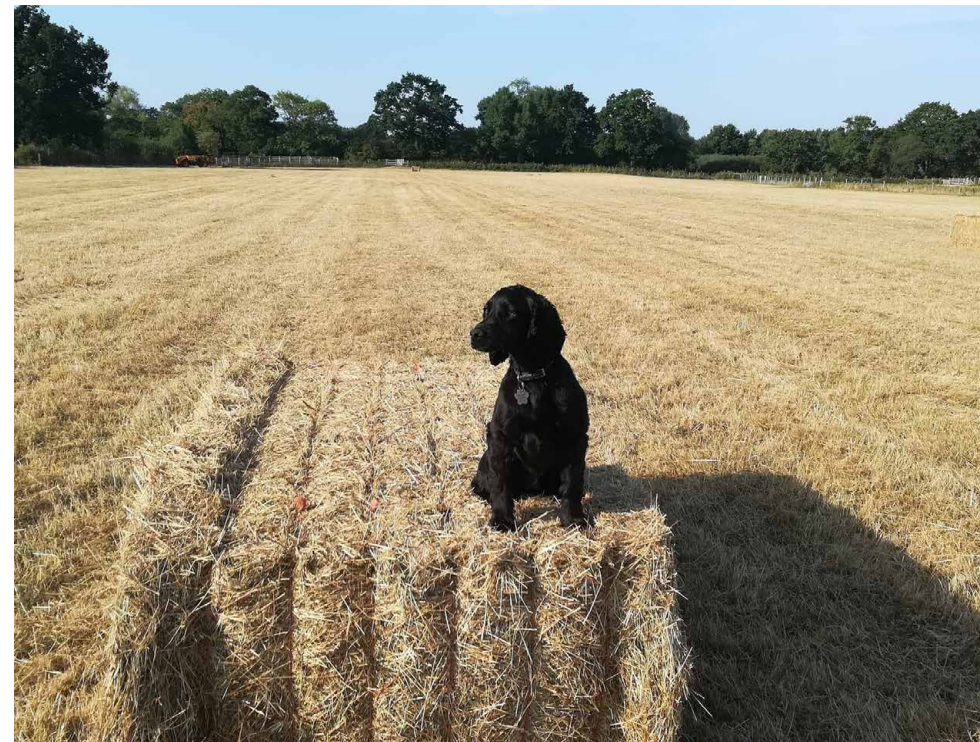
- **Protection** of ancient woodlands
- **Restoration** of arable and intensive agricultural grasslands to traditionally grazed floodplain hay meadows and permanent pastures of high biodiversity
- **Creation** of new wetland features, woodlands, hedgerows and acid grassland
- **Management** over the long-term for people and wildlife



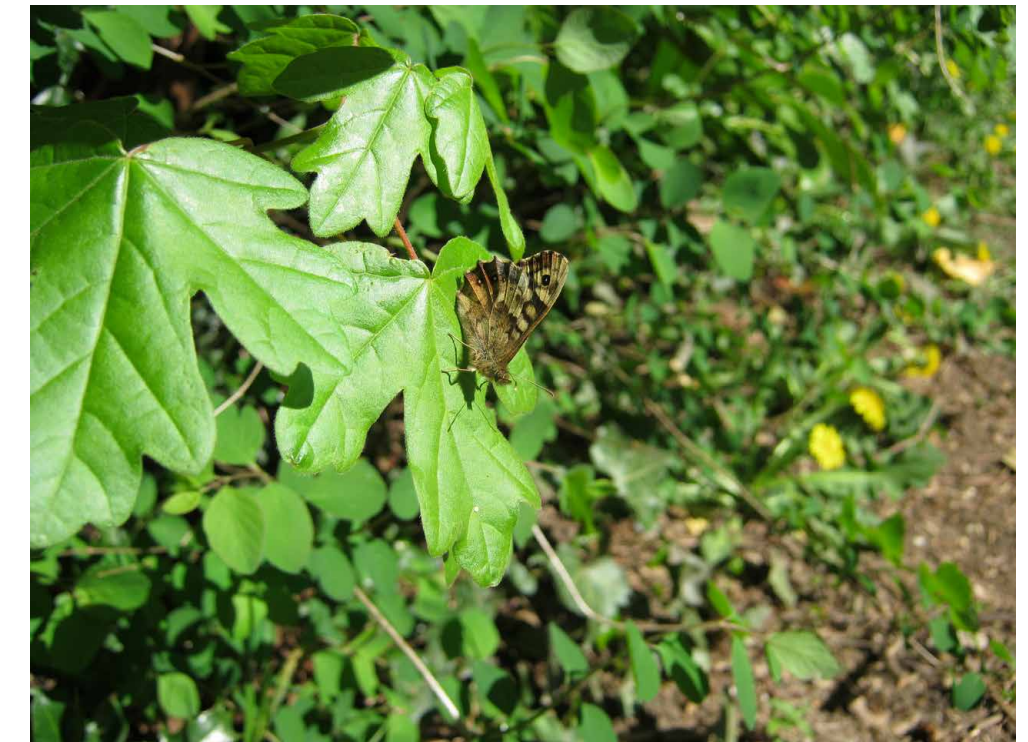
Native Bluebells – in Tanner's Copse



Oxeye Daisies – with Common Sorrel and Black Knapweed at the Ridge SANG



Langley Mead Hay Cut – assisted by the Ranger's dog Toby



Speckled Wood – on Field Maple in ancient woodland

WHY MEADOWS?

- Meadows are part of our natural and cultural heritage – but **98%** have been lost since the 1930s
- In the UK, more conservation priority species are associated with grasslands than any other habitat type
- Meadows provide **environmental benefits** including carbon storage, crop pollination and flood alleviation
- Meadows are traditionally grazed early in the year, then 'shut for hay' to allow the grasses and wildflowers to grow and set seed before a hay cut is taken in late summer
- **Floodplain meadows** such as those found at Langley Mead have their own special suite of wild plants and animals

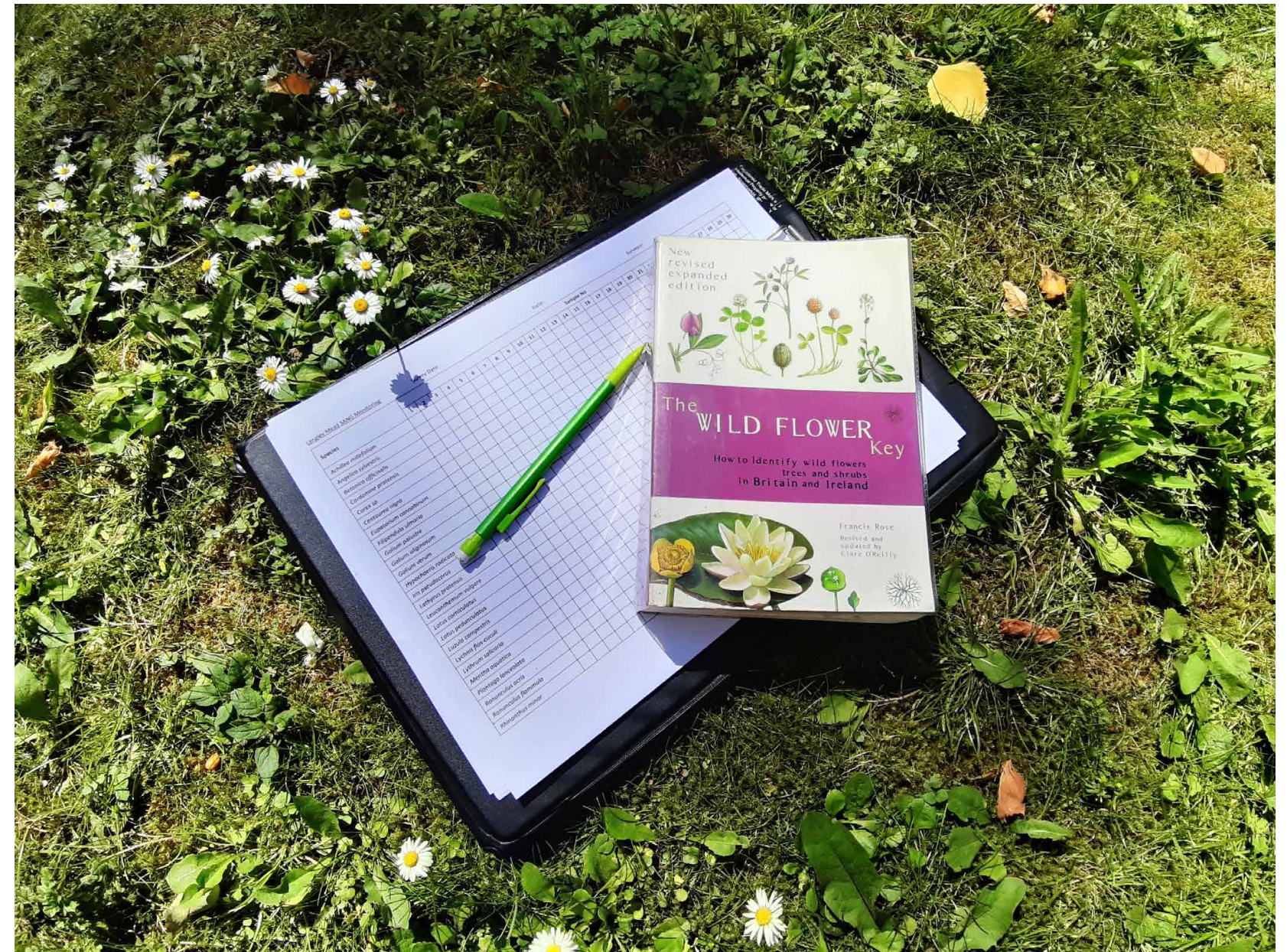
Species-rich Grassland – Langley Mead. Species visible include Red Clover, Greater Stitchwort, Black Knapweed, Ribwort Plantain and Meadow Buttercup.

MONITORING THE CHANGES

- Baseline surveys were undertaken in 2008 for the Shinfield West planning application
- We wanted to know: how have the changes in land use affected wildlife and habitats?

The 2019 survey programme:

- 189 hours of biological surveys (plants, birds, bats and bugs)
- 32 hours of visitor surveys
- Plus visitor and vegetation data collected annually at Langley Mead since 2015/16



FAST FORWARD TO 2019...



Species-rich Grassland – Great Millworth Field at Langley Mead, with abundant Bird's-Foot Trefoil and Red Clover, important insect food plants



Six-Spot Burnet Moth – seen here on Viper's Bugloss, found in the acid grassland area

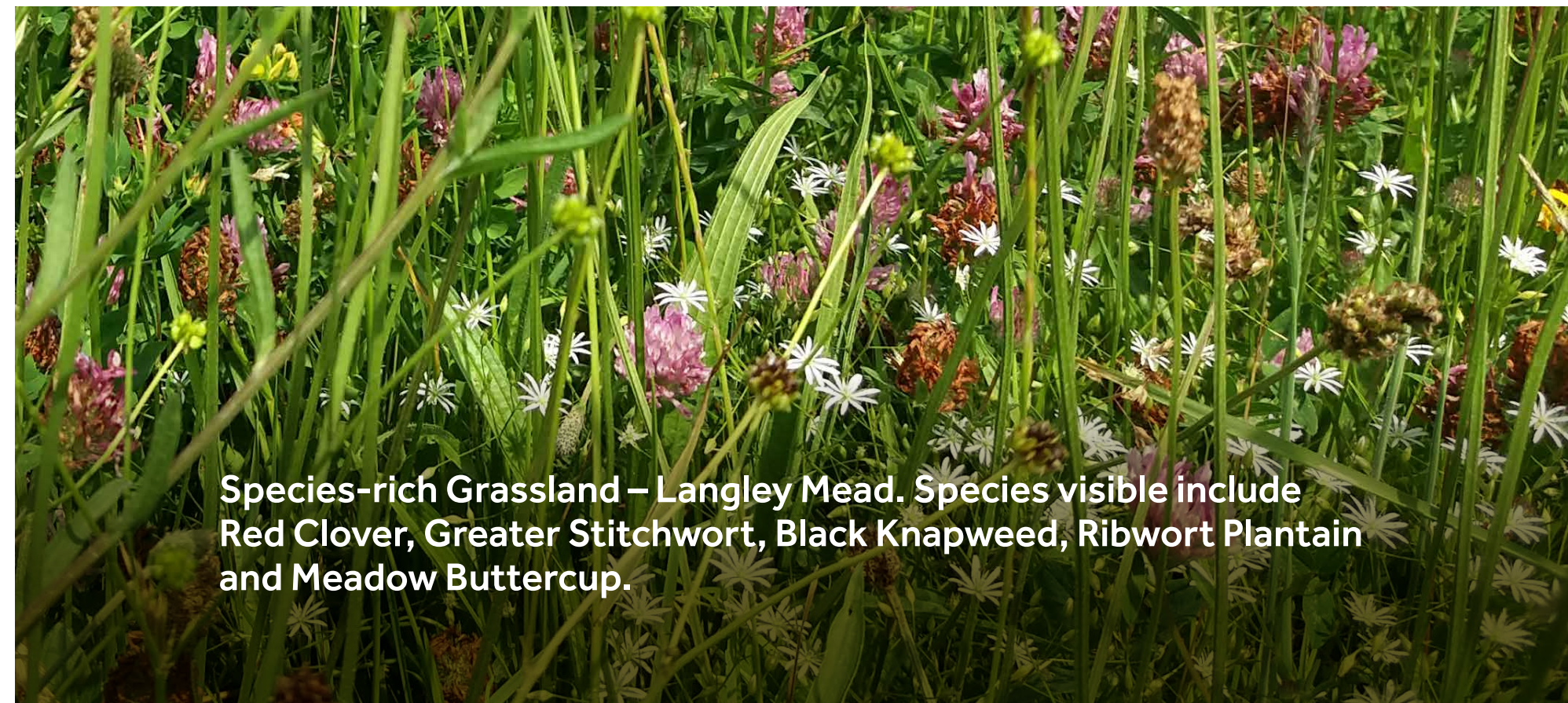




THE RESULTS



Self-heal (genus *Prunella*) – photographed at the Ridge. Regarded in medieval times as a cure-all and are still used in herbal medicine.



Species-rich Grassland – Langley Mead. Species visible include Red Clover, Greater Stitchwort, Black Knapweed, Ribwort Plantain and Meadow Buttercup.

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LANGLEY MEAD

A typical field at Langley Mead in 2009... and 2019



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THE RIDGE

The Ridge in 2009... and 2019





Knotted Clover – Berkshire Rare



Mousetail – Nationally Vulnerable

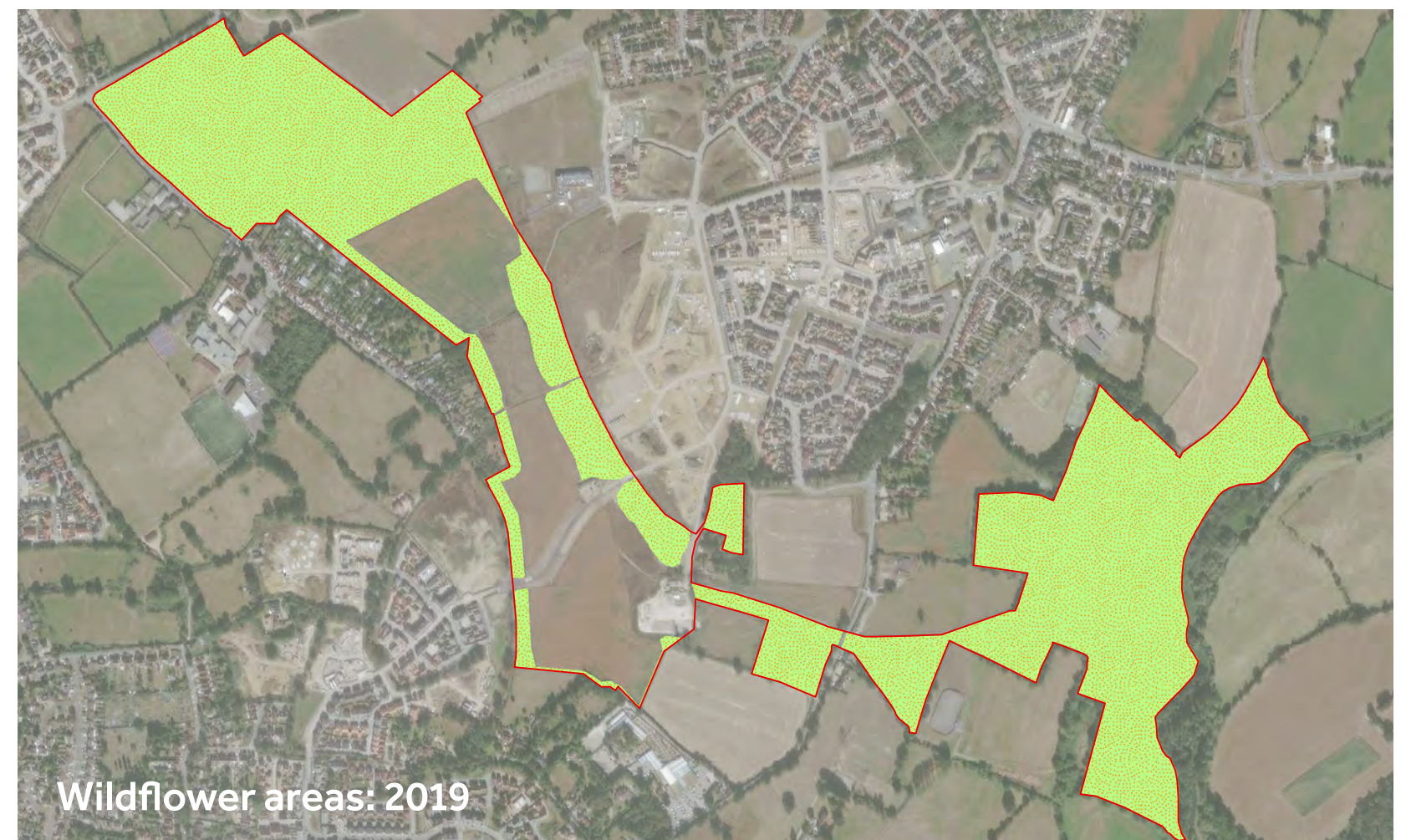
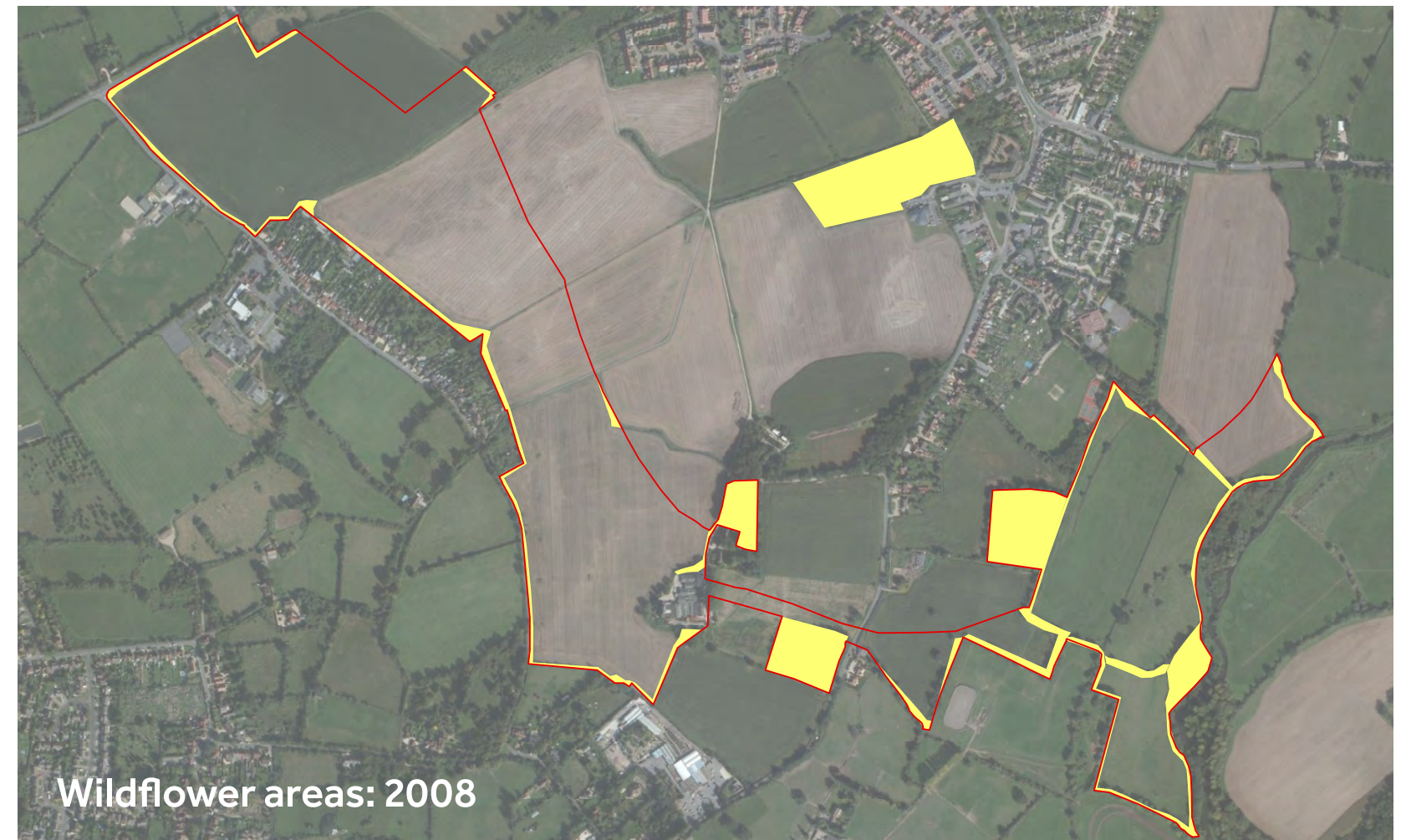
VEGETATION AND FLORA

- **255** plant species recorded across the survey area
- **5** plants on the **England Red List** and **8 Rare in Berkshire**
- **23** indicator species of **lowland meadows** in Berkshire
- Increase in plant species at **Langley Mead** from 76 to 125
- The relocated **acid grassland** species are thriving

BUT MORE IMPORTANTLY...

VEGETATION AND FLORA

- Prior to restoration, the fields at the Ridge and Langley Mead were cereal crops, or dominated by robust grasses with most wildflower species **confined to the field margins**
- Wild plants were thin on the ground and dominated by 'weedy' species such as thistles, docks and nettles
- Now there is a greater diversity of wildflowers – and more of them, covering **entire fields**
- There are many more species of grass too
- These plants **support everything else** in the ecosystem



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FIELD MARGINS

Typical field margins: Before – After



Before



After



Before



After



Bird's Foot Trefoil – food plant for over 160 species of insect



Great Burnet – Berkshire Rare, classic floodplain meadow plant



Sweet Vernal Grass – creates the classic 'fresh hay' scent



Yellow Rattle – meadow plant that helps to prevent dominance of grasses

INVERTEBRATES



Bush Cricket



Beautiful Demoiselle



A 'Loveliness' of Ladybirds



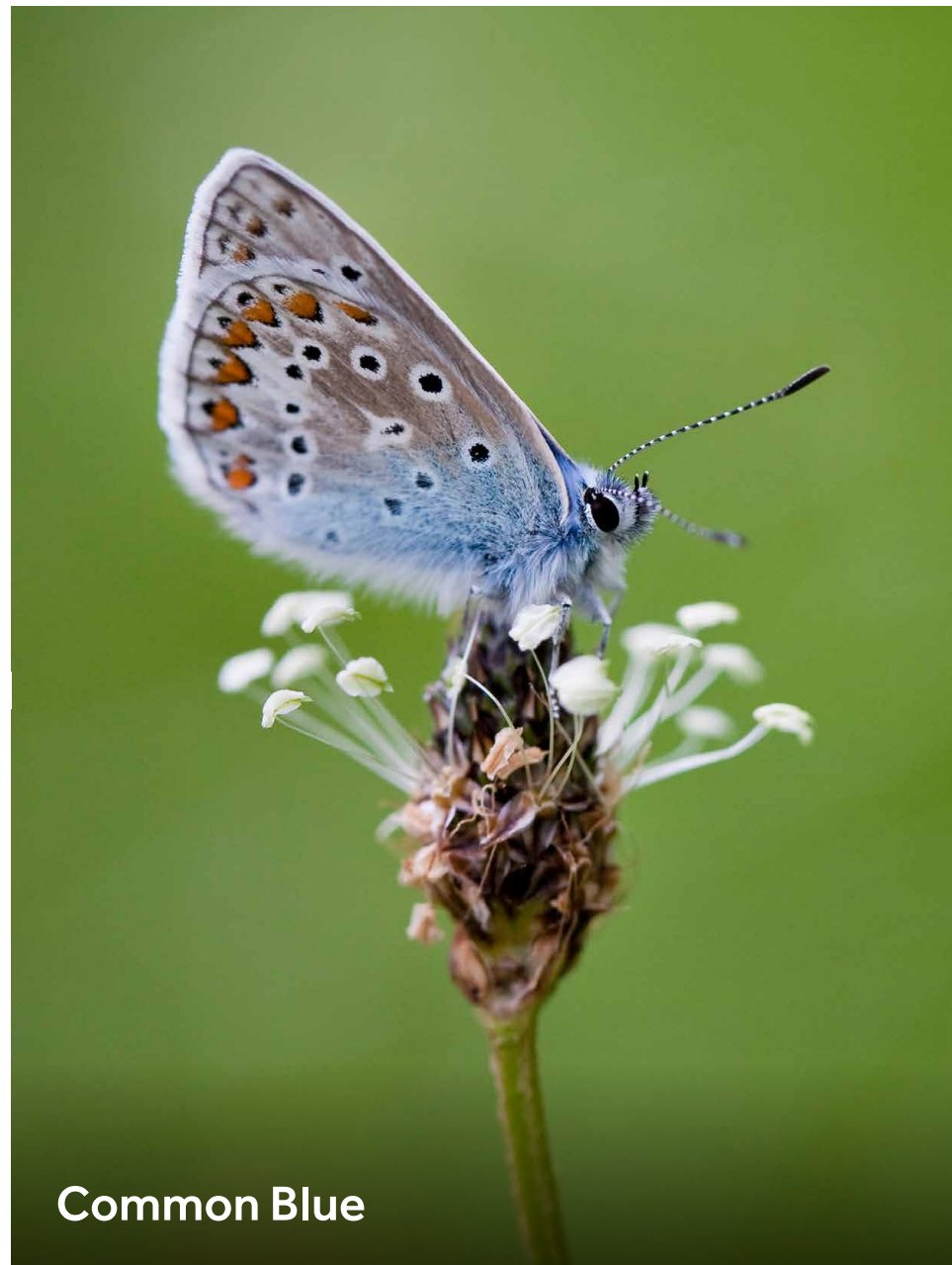
Buff-tailed Bumblebee



Stag Beetle



Speckled Wood Butterfly



Common Blue



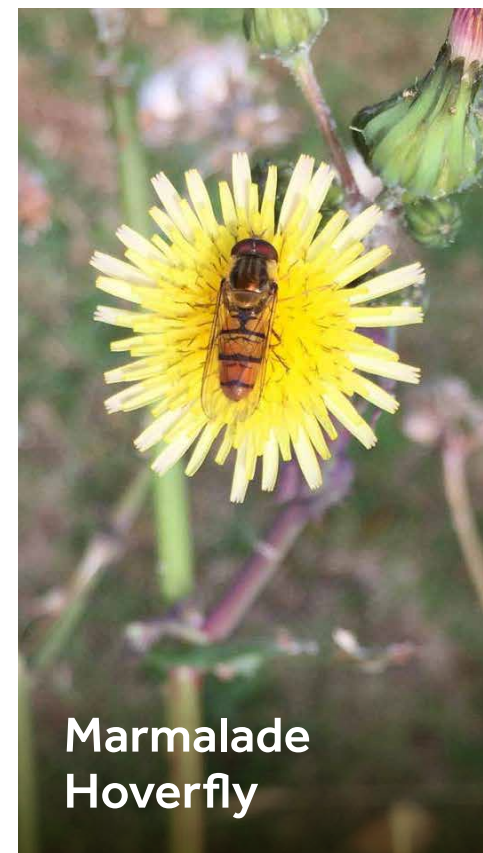
Elephant Hawk-Moth Caterpillar



Common Scorpion Fly



Nursery Web Spider



Marmalade Hoverfly



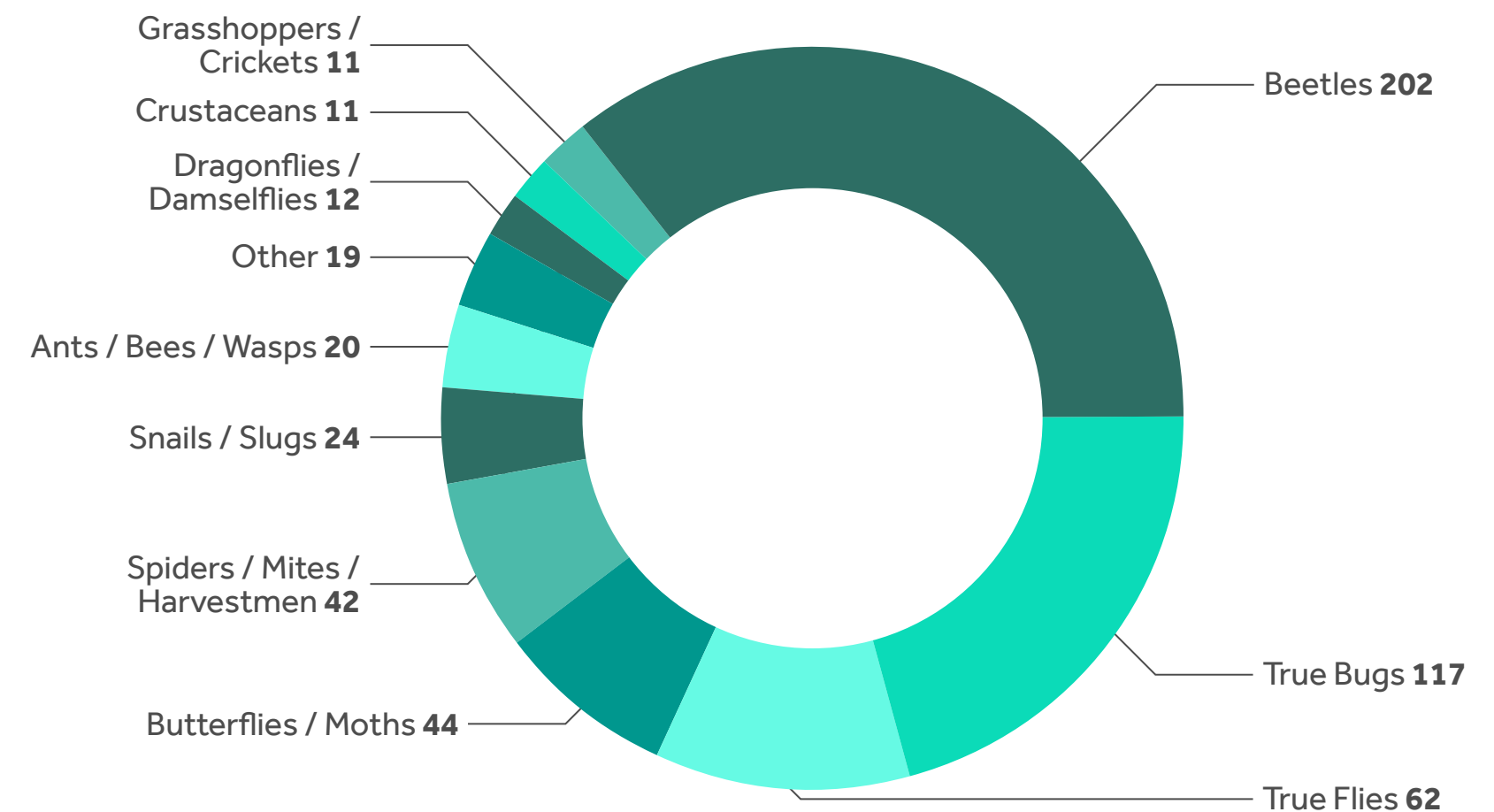
Green Shield Bug

INVERTEBRATES

- Greater habitat and wildflower diversity benefits a wider range invertebrates, which in turn provide food for a whole host of other species
- We recorded **560 species** from just one relatively small study in 2019 – almost **double** the 2008 tally of 288
- **14** of these species are nationally rare, scarce or notable
- As with wildflowers, invertebrates are now found across a **much larger area** than before
- As well as being **more diverse** in terms of species, there are more of them – **a greater biomass** – which forms the basis of a healthy ecosystem
- Many invertebrates are important **pollinators**



Different types of invertebrates recorded in 2019





Barn Owl



Kingfisher



Yellowhammer



Skylark Nest

BIRDS

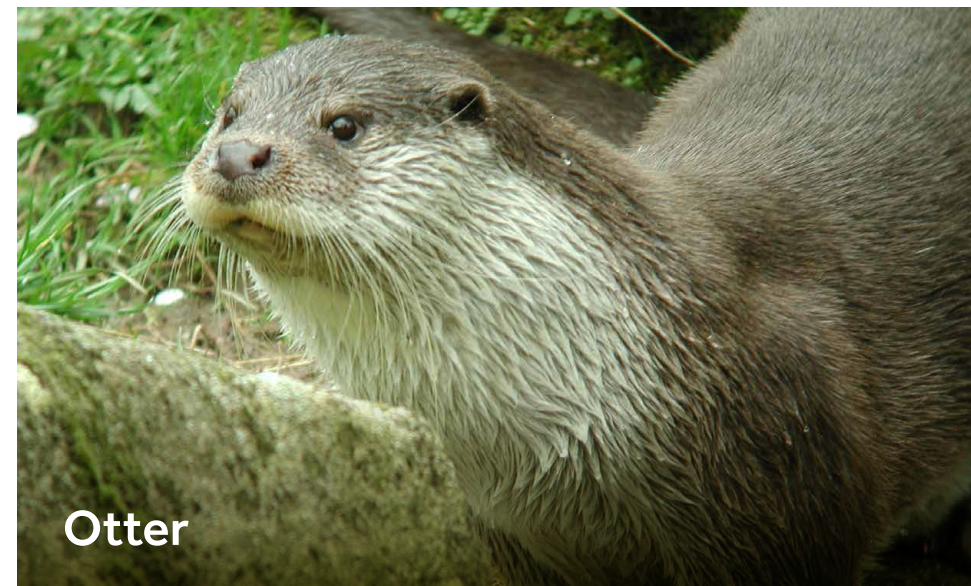
- The meadows, woodlands, hedgerows, ponds and farmland support many nesting, roosting and foraging birds
- **48** breeding bird species were recorded in 2019, including **red-listed** Skylark, Linnet, Yellowhammer, Song Thrush, Starling and House Sparrow
- The meadows provide an abundance of food in the form of wildflower/grass seeds and bugs
- Four **Barn Owl** chicks fledged from the special nest box at Langley Mead in 2018
- Kestrel and Red Kite are frequently seen over Langley Mead and the Ridge, while Buzzards breed in Tanner's Copse
- The presence of **birds of prey** is also a sign of healthy populations of mice and voles

MAMMALS

- Bat populations have remained **stable** since 2008
- Two uncommon species – the **Leisler's** bat and **Barbastelle** bat – were newly recorded
- **Millworth Lane** has been protected as a key commuting route for bats between their roosting and foraging grounds
- **Otters** are known to be present in the local stretch of the Loddon, and a holt was installed for them in 2015
- Although not specifically surveyed this time, the restoration and creation of new wildflower and bug rich habitats will have created **more food for other mammals**, including Badgers, Foxes, Hedgehogs, deer, mice, voles and shrews



Hedgehog



Otter



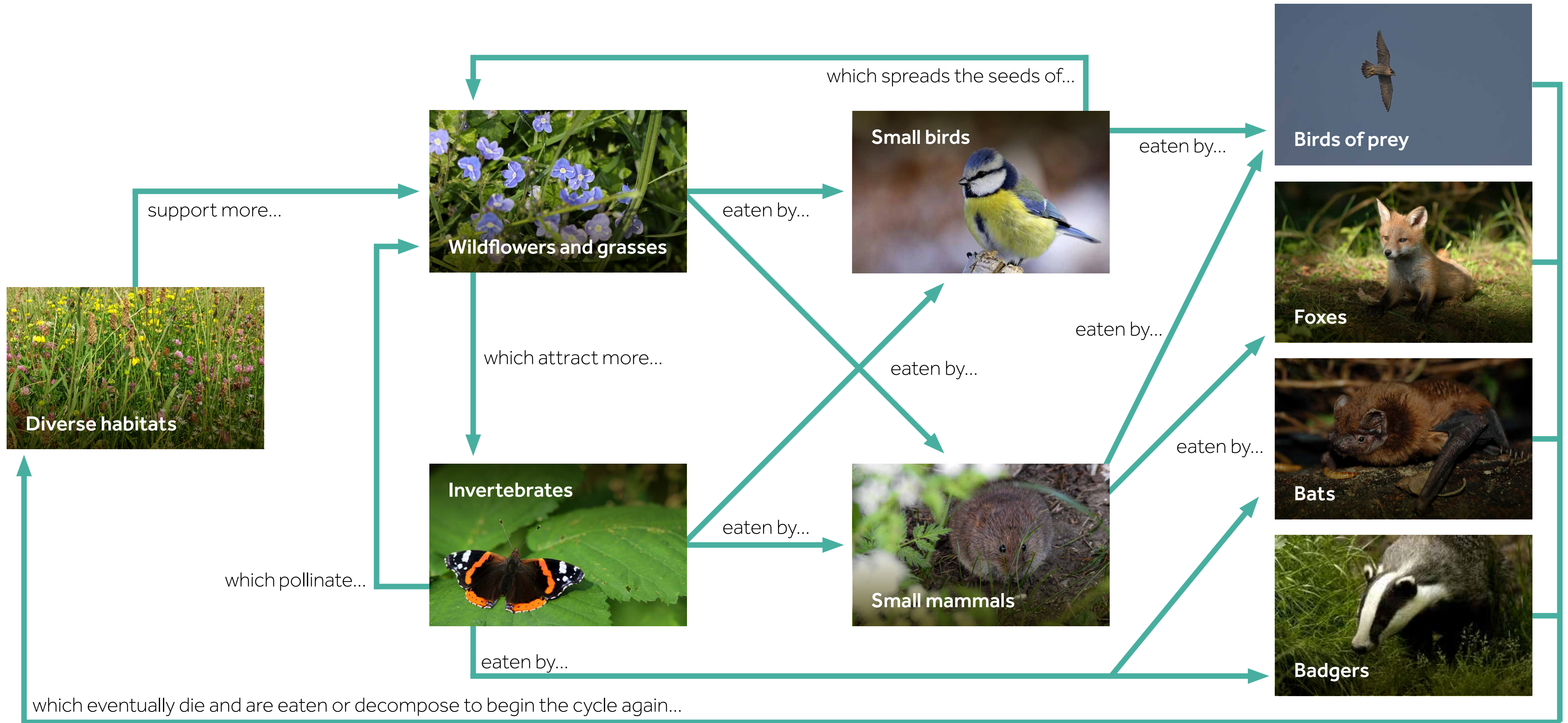
Fox



Barbastelle Bat

IT'S ALL CONNECTED...

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ALL OF WHICH ADDS UP TO...

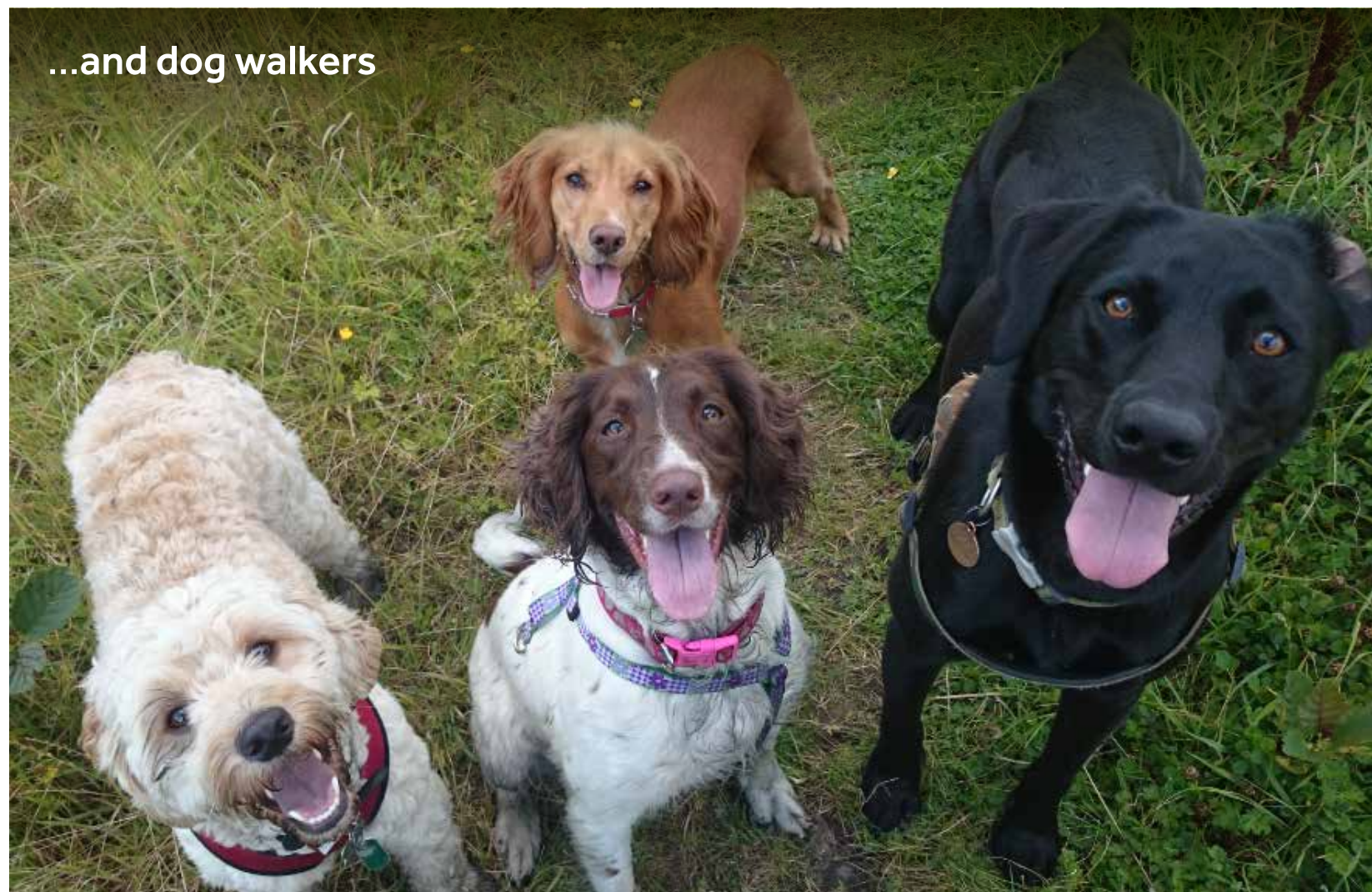


BIODIVERSITY





Langley Mead is highly valued by families...



...and dog walkers

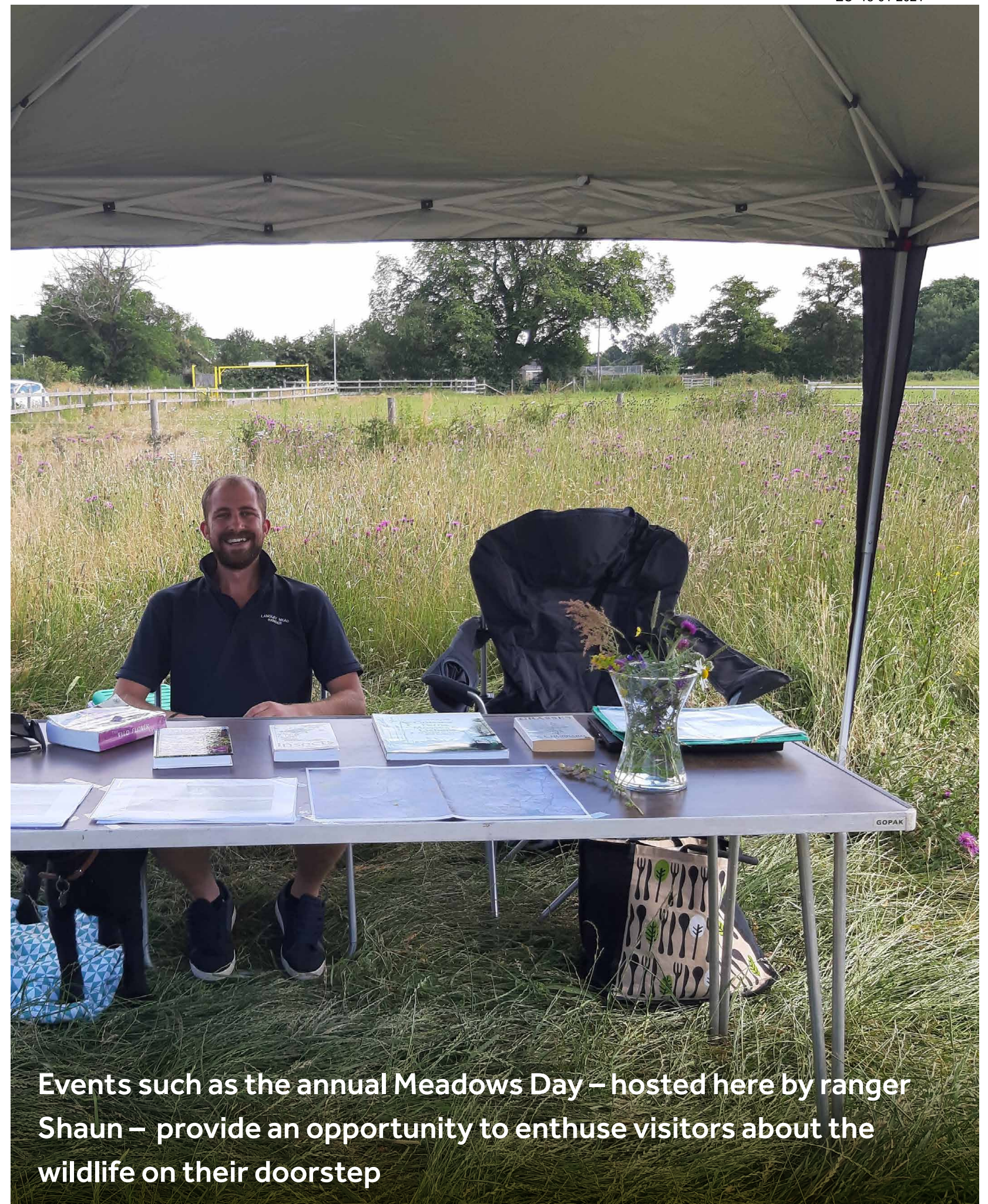
HEALTH AND WELLBEING

- The **physical, mental and social benefits** of having access to natural green space are well documented
- People living in greener areas experience notably lower levels of mental distress than those living in areas with limited access to green space¹
- Langley Mead **opened to the public** in 2015, followed by parts of the Ridge and High Copse Fields
- Residents of Shinfield and surrounding villages now have access to the meadows and woodlands of the Loddon Valley **within walking distance**, plus expansive views from the top of the Ridge
- This became ever-more important in 2020 during the COVID-19 lockdown

Access to green space saves the UK healthcare system an estimated £ 2.1 billion per year²

HEALTH AND WELLBEING

- Visitor surveys carried out annually since 2016 estimate that around 37,000 visits/year are made to Langley Mead alone
- Many visitors are local 'regulars' and take a 30-60 minute walk
- The proportion of people arriving on foot has increased over the years – up to 44% in 2019
- Over 3km of surfaced walking routes are available at Langley Mead, with more connections planned
- It features in the Shinfield Parish Council 'Easy Walks for All – Langley Mead' leaflet:
<https://shinfieldparish.gov.uk/leisure/local-walks>
- The Ridge SANG is already attracting regular dog walkers although not fully open or advertised yet



Events such as the annual Meadows Day – hosted here by ranger Shaun – provide an opportunity to enthuse visitors about the wildlife on their doorstep



GOOGLE REVIEWS OF LANGLEY MEAD – 4.4/5 STARS

"It's a great place to experience nature. I absolutely love the open meadows - and walking trails."

"Great local hidden gem"

"Love walking my dog here. He loves the open space to run in."

"Plenty of wild birds to see and good for photographers when the light is right!"

"Great spot for dog walking or an amble."

"Very convenient walk, good footpaths suitable for pushchairs"



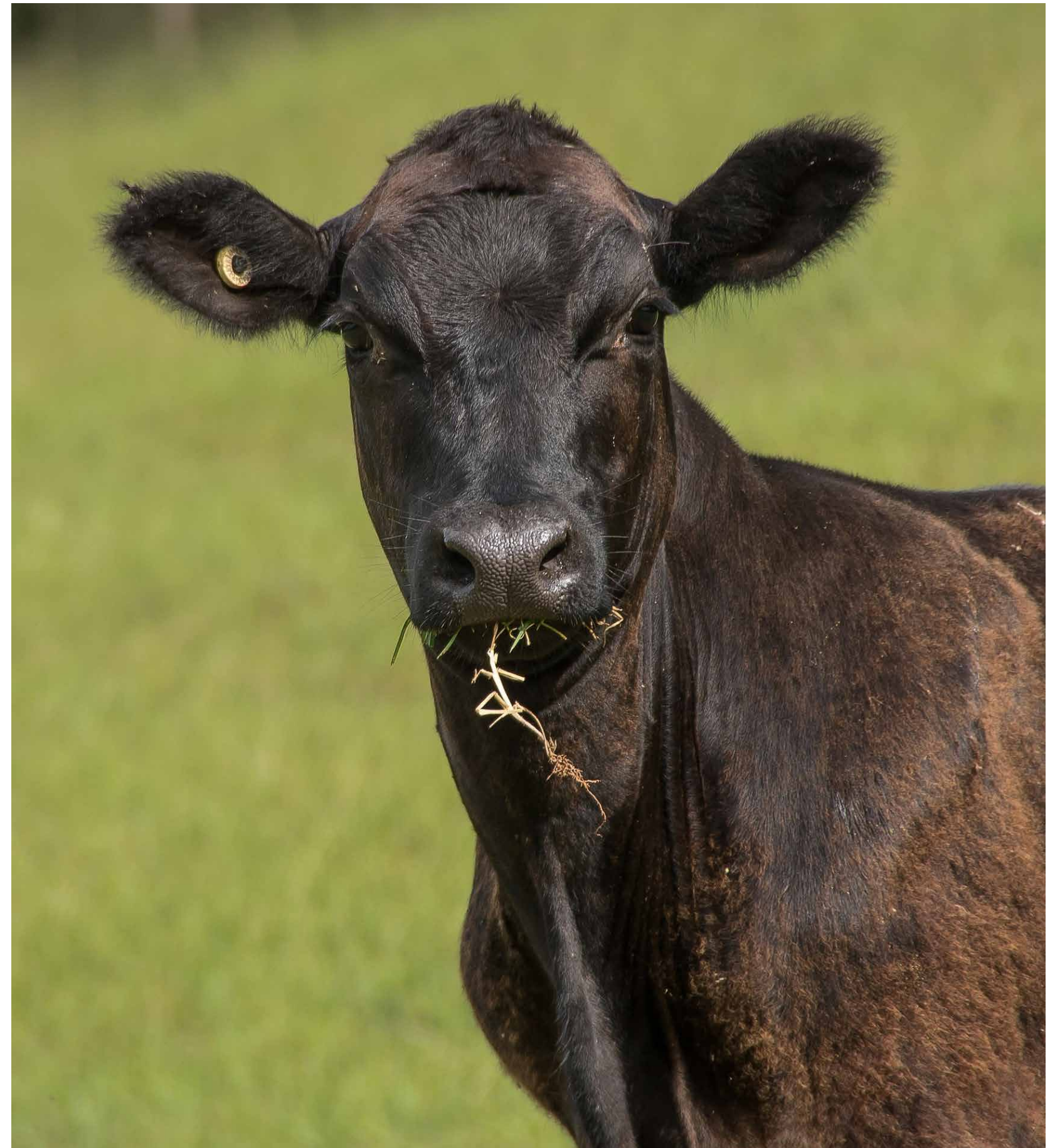
THE ECONOMIC BENEFITS OF BIODIVERSITY

The Rural Economy

- Conservation herd of beef cattle are used to graze Langley Mead and the Ridge, providing an income for the University
- The annual hay crop can also be sold, or used to feed livestock within the University Farm
- Service charge paid by new homes towards maintenance makes the SANGs financially sustainable

The Bigger Picture

- **£680 million** = the estimated annual value of pollinator species to the UK economy³
- **£2.5 billion** = the estimated value of urban recreation in nature in England in 2017⁴
- **£2,813** = the amount added to the average house price in GB by local green and blue space⁵





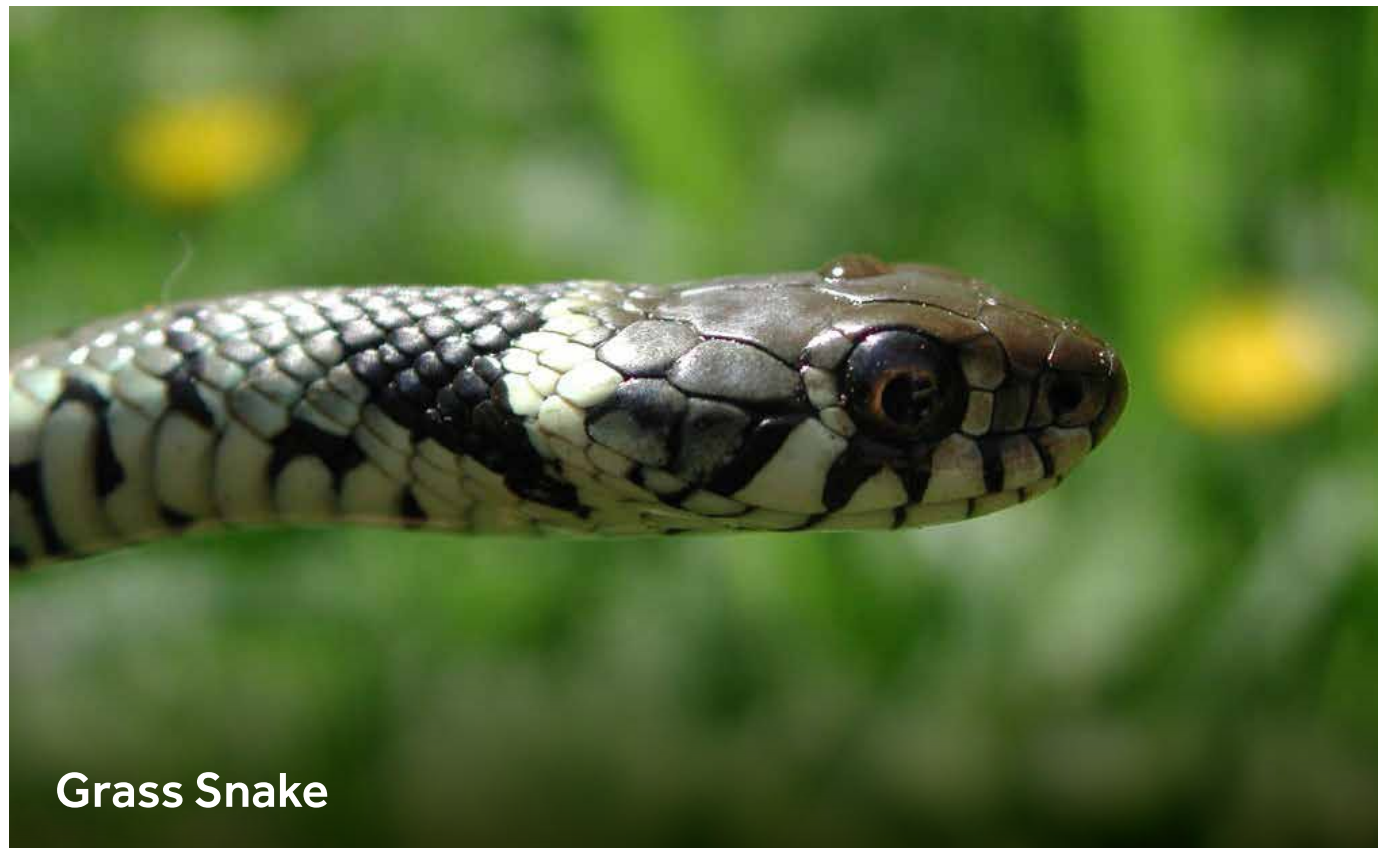
WHAT NEXT?

- 21 ha **extension** to Langley Mead, providing a continuous green link from the Arborfield Road to Church Lane via High Copse Fields and the Ridge
- Opening the next phase of the **Ridge**
- Opening up the **Loddon Triangles** for public access – 2,000 new trees planted on the site of a long lost woodland
- Bringing **positive conservation management** to Tanners Copse and High Copse

The future of Langley Mead : 39 ha (96 acres) of publicly accessible wildlife-rich meadows through the Loddon Valley

WHAT ELSE?

- Create more 'stepping stone' ponds for amphibians such as **Great Crested Newts** and reptiles such as **Grass Snake**
- Establish a nursery for iconic floodplain species such as **Snake's Head Fritillary**
- Even bigger **monitoring** effort in Year 10 to include more species groups
- And a new **Community Nature Hub** and **Growing Space** adjacent to High Copse



Grass Snake

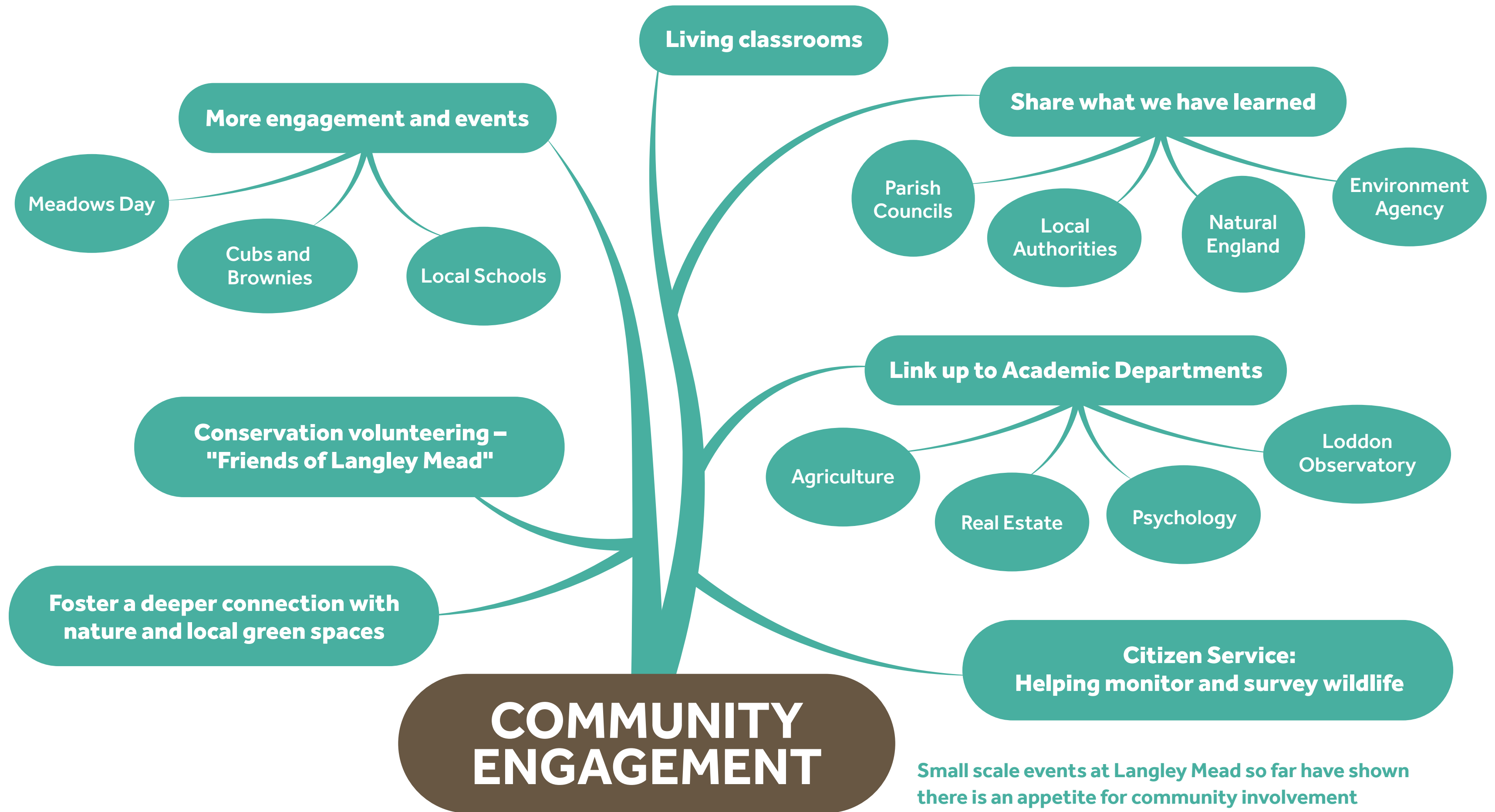


Snake's-Head Fritillary

COMMUNITY ENGAGEMENT

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Agenda Item 9
EC 18-01-2021



Small scale events at Langley Mead so far have shown there is an appetite for community involvement

STRATEGIC GREENSPACE VISION: TEN YEARS ON

REFERENCES

- 1** Balfour, R. and Allen, J. (2014). Local action on health inequalities: Improving access to green spaces. Health Equity Evidence Review 8: September 2014, Public Health England.
- 2** Central Bedfordshire Council (2013). Healthy Spaces: Health and Wellbeing.
- 3** Department for Environment, Food and Rural Affairs (2018). Michael Gove announces new funding to protect bees.
- 4** Office for National Statistics (2019). 'Cultural Services. Section 10 of UK natural capital: urban accounts.
- 5** Jones, R. (2019). Nearby green space can add £2,500 to property price, ONS data shows. The Guardian.

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